

## Jr. Inter Chemistry Model Paper

**Note :** Read the following instructions carefully.

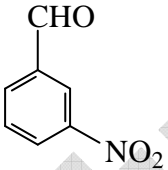
1. Answer all questions of 'Section-A'. Answer any six questions in 'Section - B' and any two questions in 'Section - C'.
2. Answer all the questions in 'Section - A' in a sequence.
3. Draw labeled diagrams wherever necessary for questions in 'Section - B' and 'C'. No need of drawing any diagram in 'Section - A'.

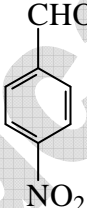
### SECTION-A

I. **VSAQ: Answer ALL the questions.**

**10 x 2= 20 M**

1. Which Oxide cause acid rain? And what is its  $P^H$  value?
2. Define the terms a) COD?            b) BOD?
3. Calculate Kinetic energy in calories of 5 moles of nitrogen at  $27^{\circ}C$
4. What volume of  $CO_2$  is obtained at STP by heating 4g of  $CaCO_3$ ?
5. Lithium salts are mostly hydrated. Why?
6. Describe the important uses of quick lime?
7. Write the uses of ZSM-5.
8. Calculate the pH for 0.004 M NaOH.
9. How is water gas prepared?

10. Write the IUPAC names of
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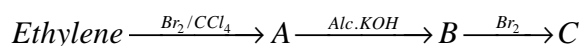


### SECTION-B

II. **SAQ: Answer any SIX of the following questions.**

**6 x 4 = 24 M**

11. Deduce (a) Boyle's law and (b) Charle's law from kinetic gas equation.
12. Balance the following redox reaction by ion-electron method in acidic medium.  
 $MnO_4^-(aq) + SO_2(g) \rightarrow Mn^{2+}(aq) + HSO_4^-(aq)$
13. State and explain the Hess's law of constant heat summation with an example?
14. Discuss the application of Lechatelier's principle for the industrial synthesis of sulphur trioxide.
15. Discuss the principle and the method of softening of hard water by synthetic, ion exchange resins.
16. Explain borax bead test with a suitable example?
17. Name the products A, B and C formed in the following reactions. Give the equations for the reactions



18. What is substitution reaction? Explain any two substitution reactions of Benzene?

### SECTION-C

III. LAQ: Answer any ONE of the following questions.

2 x 8 = 16 M

19. Write the important postulates of Bohr's atomic model explain the success of Bohr's theory of Hydrogen atom?
20. What do you understand by hybridization? Explain different types of hybridization involving s and p orbitals.
21. What is periodic property? How the following properties vary in a group and in a period? Explain?
  - a) Atomic radius
  - b) Ionization potential
  - c) Electro gain enthalpy

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